Junior technical creativity as one of the directions of additional education has already formed its own traditions for a few decades. But in the last century, for ones directly engaged in circles and correspondence clubs at scientific and technical journals, opportunities for a systematic education not been provided. Such additional education of a technical orientation now lost its relevance. This century life rhythm requires updating, improving technologies used in the system of additional education, i.e. their technosphere and use in process of additional education the innovative technologies and technical means for the possibility of consolidation and expansion of school knowledge, for receiving additionally to school knowledge the extensive theoretical and technological knowledge, the formation of a creative personality.

And in the project «The development of technosphere activities at institutions of additional education of research, engineering, technical, engineering orientation for children» as part of the Federal target programme for the development of education in Russia for 2011 - 2015 years, complex approach to modernization of educational process is disclosed in the concept of «Technosphere». Technosphere of educational institution is a collection of educational content, resources, technologies, standards, and related with it communications and public relations, in this case the concept of “Technosphere” following V.M. Rozin is considered as the sum of technologies [2], and should be based on the implementation a complex approach to management of information resources and the formation of the concept of information and communication solutions for educational institutions.

At turn of the 20th and 21st centuries defined the new requirements for a person’s education, which not only by special knowledge is now determined, but also and primarily by versatile development of personality. Is very important for society to educate creative people having creative thinking, capable of active social adaptation in society, self-education and self-improvement. Therefore, a priority in education, starting with school is the unity of the two paradigms: informationally cognitive and personally oriented. For realization of this purpose as practice shows the combination of basic and additional non-formal education serves, which is one of the determining factors for development of abilities and interests of a person, his professional self-determination [1,2].

One of the major aspects of implementation problem of any educational programme is the forms and methods of teaching. Concerning forms, we support the views that are important firstly, their variety and combination of various forms, secondly, teachers’ initiative in finding new aspects in the implementation of forms used. Similarly, in regarding methods: it is also possible to use techniques of different methods for the organization of productive activities of students and traditional pedagogy and student-centered learning.

At the first stage as part of the programme of education development for 2011 - 2015 years formed the strategic development projects of education, including a number of new interrelated directions. As one of the determining directions is provided the efficient use of resources of education system sociocultural modernization based on the use at model of technosphere the bases of internetworking education, creation of an unified information educational environment of district, city and the development of electronic certificates for educational institutions. Such socio-educational environment includes the inside and outside school space, and assumes creation of an integrated education space for different children categories (schools, institutions of additional education, sports facilities and other social sectors). Formation of urban social and educational infrastructure should be aimed at establishing and maintaining personal needs of children, implementation of activity and competence approach.

For example, many cities, in particular Saratov, being the largest cities, having the developed educational and scientific environment, may offer such an opportunity for students. This requires schools, universities, research institutions and the business rearrange the relationship between them, providing educational and innovative alliance needed for a wide variety of communications, innovations and entrepreneurship. Before last year there was draft of the Strategy of socio-economic development of the Saratov region until 2025 and the Programme for its implementation in the field of education, yet the problem is that standards of additional education programmes are not developed, and the standard cannot be reduced to the content of programmes. Is required scientific analysis of the problem of organizing such an interworking.

In such an alliance in Saratov the Technical University can take a key role, because exactly it, preparing staff of engineers and managers, provides a bunch of different structures (educational, scientific, production,
implementation, etc). According to the concept of “creating the system of continuous education, training and retraining professional personnel through the formation of branch clusters of institutions of higher, secondary and elementary vocational training, based on higher educational institutions of the region, and interacting with branch leading enterprises in the implementation of innovative research and educational projects and training personnel of all levels of professional education “ on basis of the Technical University united a number of educational institutions (colleges, high school, technical schools) and other organizations (involved in educational activities by organizing practices, providing laboratory equipment, teaching materials, providing experts), that allows to solve questions of creation of innovative environment, providing high-quality implementation of the new educational standard, continuity of educational programmes, designing of innovative forms and techniques of individual work with students to meet their educational interests, organizing extracurricular activities of students.

Modern information technologies make innovation copyrights of one educational institution accessible to others. Thus at the University created the conditions for the development of a technosphere model of the innovative additional school education system based on preliminary training management. Now gained a great experience in organizing of students’ project activities (design lessons, project weeks, projects competitions etc.). The obligatory development of project activities envisages the additional education of children in research, engineering, technical, engineering, organizational and administrative orientation.

Experience of the developed countries confirms that innovative thinking formed since school time. Without missing the time the Technical University must work with schoolchildren, so to form the basis for their research activities at the Technical University created a new model of technically oriented organization the “School Technopark”. Its main task as a resource center of the additional education technosphere is to unite young researchers from different schools and colleges of the city for the possibilities for acquaintance and practical training to work with modern high-tech engineering and scientific equipment within the framework of additional education. The school technopark realizes joint work of schoolchildren and academic staff of the Technical University via the 15 educational directions. There pupils of older and middle age, students of secondary special educational institutions are engaged. Mechatronics and Robotics nowadays are the most attractive technologies for building automatic systems. Pupils do the research, development, experimental works, development of new and improvement of existing constructions and apparatuses, technical devices. Children participate in the performance of tasks that are the part of scientific work carried out at the University and enterprises. The projects of the direction “Mechatronics and Robotics in aeromodelling, programmable toy robots (walking robots, mobile carts, tanks), etc. implemented with the support of the “Regional Center of additional education for children “Search” of the Ministry of Education of Saratov region.

Yearly senior pupils of all schools can submit reports, essays, projects, creative reports, constructions and devices, items based on results of research, development, experimental activity at All-Russian Research Conference “The first steps in science”, which is held at the Technical University in framework of the All-Russian Festival of Science. The Conference aim is to attract pupils of 9th-11th forms to research activities, as well as supporting the work of school research societies.

Also established a number of schools with laboratories at the University chairs (the School of Young Cybernetics, School of Young Innovator, School of Young Sociologist, School of Environmentalist and so on). On the lessons in these schools master classes conducted with pupils, preparing children to study at the University.

In the children computer school (CCS) at the International Center Aptech pupils of different ages (from 2nd to 11th forms) are taught to modern information technologies (animation, video clips, movies, etc.). At the present time, it is one of the leading schools in the country in the area of kids and teens education to modern information technologies. Is not only mastered the latest software, but pays special attention to the development of children creative abilities. The children computer school is a basic educational center of Softline Academy for academic support children computer schools Softline, established in universities and schools in Russia and Kazakhstan.

The international, national, regional and municipal competitions and conferences were held. The competitions among CCS pupils holding twice a year provide an opportunity for pupils to present their projects for wide audience, as well as to look at works of pupils of other areas. The best works take part in national and international competitions. Pupils of the CCS participate in regional, All-Russia and international competitions and festivals of computer works and win in them. Our city and region are proud with their successes. For special achievements in learning of computer technologies the best pupils were awarded with diplomas of the Ministry of Education of Saratov region, breast signs “Hope of Gubemia”. Pupils of the CCS are the finalists of the international competition “Digital Wind”. Mastering advanced information technologies, new knowledges school children enter higher education institutions with the formed creative thinking, functional research skills as universal way of assimilation of reality.

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